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PROGRAM DOCUMENTATIONS:

MARQTY1.FTN
CAMDATA1.FTN

Job Order 74-903

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SPACE AND LIFE SCIENCES DIRECTORATE



National Aeronautics and Space Administration
LYNDON B. JOHNSON SPACE CENTER
Houston, Texas

August 1978

LEC-12376

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16. Abstract Two special purpose computer programs written in support of the Large Area Crop Inventory Experiment (LACIE) interactive aggregation system are described. Computer program MARQTY1.FTN computes a summary of the data on one of the files used by the interactive aggregation systems. Computer program CAMDATA1.FTN summarizes a Classification Mensuration Subsystem (CAMS) master data file from the interactive system data base.			
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1. PROGRAM DESCRIPTIONS

1.1 MARQTY1.FTN

This program reads and performs calculations on an output file (CAMREP.US) of the Crop Assessment Subsystem (CAS) interactive system. This program, as well as CAMDATA1.FTN, is written in Fortran IV Plus to operate on the Programmed Data Processor, model 11/45 (PDP 11/45), computer under the Resource Sharing Executive, model 11D (RSX-11D), operating system. The CAS output file, CAMREP.US, is created during an aggregation and consists of the Classification and Mensuration Subsystem (CAMS) segments, crop estimates, and other data. There are no inputs to the program other than a file with the name CAMREP.US. (A program functional flowchart is presented in figure 1.)

1.2 CAMDATA1.FTN

This program reads and performs calculations on the CAMS master data file (CAMREP78.USW) of the CAS interactive system. This file must be available and renamed CAMDATA.IN. The input file contains all CAMS segment classification results as well as biostage, evaluation code, and classification data information. There are two requirements for the running of this program. First, a file with the name CAMDATA.IN must be available. Secondly, upon execution the program will prompt if the user wishes a complete dump of the file. A response of "Y" will give a total listing of the contents of CAMDATA.IN. If the user responds with an "N" the listing will be suppressed, and only a summary of this file will be output. This summary is listed for either a "Y" or an "N" user response. (A program functional flowchart is presented in figure 2.)

1-1
1

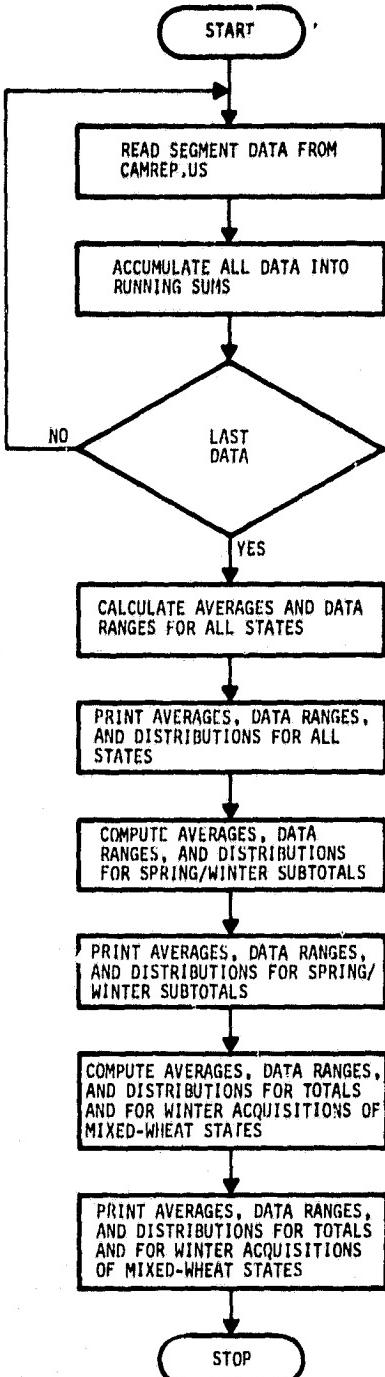


Figure 1.— Program functional flowchart for MARQTY1.FTN.

1
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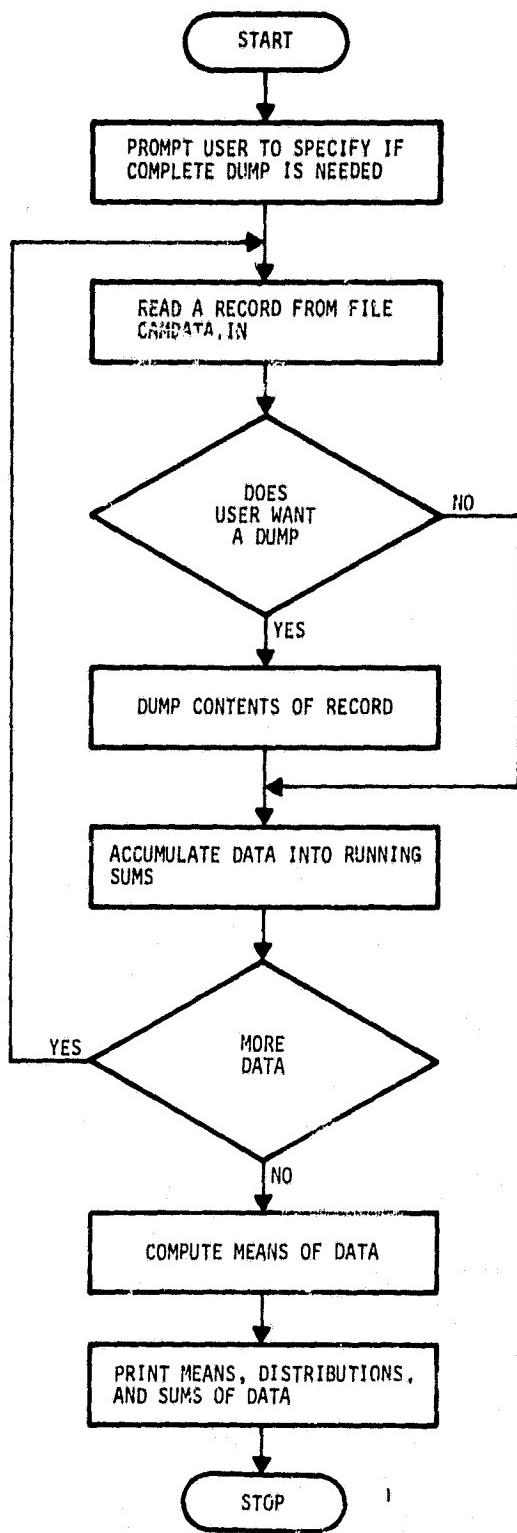


Figure 2.— Program functional flowchart for CAMDATA1.FTN.

2. OUTPUT DESCRIPTIONS

2.1 MARQTY1.FTN

This program computes and outputs to the Gould printer the following quantities:

<u>Quantity</u>	<u>Heading label</u>
Number of lines read from CAMREP.US (For every state)	-
State name	-
Total number of spring and winter segments for the given state	SPRING SEGS WINTER SEGS
Number of spring and winter segments designated 100 percent other	SPRING OTHER WINTER OTHER
Total and average of spring and winter ratioed wheat for all segments of that state	WHT (RATIOED)
Total and average number of days between last segment acquisition and classification date	PROCESSING TIME
Average for the last segment acquisition date for all segments	AVE LAST ACQ DATE
Percentage of ratioed wheat in the segment with the least percentage of ratioed wheat	MIN PCT WHT (RATIOED)
Percentage of ratioed wheat in the segment with the largest percentage of ratioed wheat	MAX PCT WHT (RATIOED)
Earliest acquisition date	EARLIEST ACQ DATE
Latest acquisition date	LATEST ACQ DATE

2-1
4

<u>Quantity</u>	<u>Heading label</u>
Distribution and percent distribution of latest acquisitions with respect to evaluation code	EVALUATION CODE DISTRIBUTION
Distribution and percent distribution of latest acquisition with respect to acquisition month	ACQUISITION AND % DISTRIBUTION
Distribution and percent distribution of CAMS data with respect to the CAMS estimate	DISTRIBUTION AND % DISTRIBUTION OF CAMS DATA
Distribution of processing times for segments in weeks	DISTRIBUTION OF SEGMENT PROCESSING TIMES (WEEKS)

The quantities mentioned above are then totaled for (1) all spring acquisitions, (2) all winter acquisitions, (3) sum of all acquisitions, and (4) winter acquisitions of mixed states (South Dakota and Montana).

2.2 CAMDATA1.FTN

If the program user responds with a "Y" to the cathode-ray tube (CRT) prompt, the following information will be printed on the Gould printer for every segment in CAMDATA.IN:

<u>Segment No.</u>	<u>Description</u>
1	Record number
2	Segment number
3	Crop type (1 ≡ spring, 2 ≡ winter, 3 ≡ mixed)
4	Classification biostage
5	Evaluation code
6	Classification date

2-2
5

<u>Segment No.</u>	<u>Description</u>
7	Number of acquisitions
8-11	Acquisition dates and biostages
12	% spring wheat
13	% winter wheat
14	% small grains
15	% spring small grains
16	% winter small grains
17	% winter wheat (ratioed)
18	% spring wheat (ratioed)
19	% thresholded
20	% other
21	% unidentifiable
22	Latest acquisition in packet
23	Winter wheat biostage adjustment
24	Spring wheat biostage adjustment

The following is the data summary which is output:

<u>Quantity</u>	<u>Heading label</u>
Total number of winter segments with CAMS estimates	WINTER SEGS
Total number of spring segments with CAMS estimates	SPRING SEGS
Average CAMS estimate over all spring segments	AVE SPRING
Average CAMS estimate over all winter segments	AVE WINTER

2-3
6

<u>Quantity</u>	<u>Heading label</u>
Distribution of all acquisitions with respect to evaluation code	EVALUATION CODE DISTRIBUTION
Distribution of all acquisitions with respect to month of acquisition	ACQUISITION MONTH DISTRIBUTION

~~2-4~~
7

3. COMPILED LISTING OF MARQTY1.FTN

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FOOTMAN ALPHONSE VILLEURBANNE
COURTIAL, PARIS
13591111 25 MAY 1978

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FUNCTIONS AND SUPPORTING DOCUMENTS
ASSIGN

STRUCTURE OF DOCUMENTS
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12

4. COMPILED LISTING OF CAMDATA1.FTN

PCETIAN IV-PLUS 402051
PCETIAN V-510 /PCETIAN PCES-510

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313	17650	1420
314	17700	1420
315	17750	1420
316	17800	1420
317	17850	1420
318	17900	1420
319	17950	1420
320	18000	1420
321	18050	1420
322	18100	1420
323	18150	1420
324	18200	1420
325	18250	1420
326	18300	1420
327	18350	1420
328	18400	1420
329	18450	1420
330	18500	1420
331	18550	1420
332	18600	1420
333	18650	1420
334	18700	1420
335	18750	1420
336	18800	1420
337	18850	1420
338	18900	1420
339	18950	1420
340	19000	1420
341	19050	1420
342	19100	1420
343	19150	1420
344	19200	1420
345	19250	1420
346	19300	1420
347	19350	1420
348	19400	1420
349	19450	1420
350	19500	1420
351	19550	1420
352	19600	1420
353	19650	1420
354	19700	1420
355	19750	1420
356	19800	1420
357	19850	1420
358	19900	1420
359	19950	1420
360	20000	1420
361	20050	1420
362	20100	1420
363	20150	1420
364	20200	1420
365	20250	1420
366	20300	1420
367	20350	1420
368	20400	1420
369	20450	1420
370	20500	1420
371	20550	1420
372	20600	1420
37		

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OF POOR QUALITY.

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**FORTRAN INPLUS Y02-S1
VACFTV1.FTN**

1e10e03 25e4e78 PAGE 8

REGISTERS	NAME	ADDRESS	DATA	REGISTERS	NAME	ADDRESS	DATA	
RS	R03	4=01910	000020	16	(4,2)			
RS	R04	4=003479	00120	8	(2,2)			
RS	R05	4=003479	00120	8	(2,2)			
STATES	S04	4=020070	000164	16	(9)			
TCF	R04	4=010130	001140	16	(3,2)			
TCFALS	S04	4=009000	002021	520	(10,2,13)			
TCFTH	S04	4=020173	00020	8	(4)			

LABELS

LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS	LABEL	ADDRESS
1200	0	1400	1500	1=000174	18001	1=01124	20009
2200	1=001578	2540	0	1=002530	3100	1=01124	3200
3300	1=003272	4200	1=003602	6600	1=000092	4760	
4400	1=003350	4550	1=003624	6800	1=003624	4870	
4850	1=0031622	5900	0	5100	1=01124	3310	
5570	0	5610	1=01124	5920	1=01124	3420	
6020	1=001646	6050	1=010334	6200	1=01124	6300	
6060	1=002512	6070	1=001770	6600	1=001770	6700	

FUNCTIONS AND SUBROUTINES REFERENCED

- L ASSIGN START S01

TOTAL SPACE ALLOCATED = 041250 8532

VACFTV1.LP194CTY1.FTN